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Recent developments and new challenges in commodity markets, and policy options for commodity-based inclusive growth and sustainable development

Note by the UNCTAD secretariat

Executive summary

This paper reviews recent developments in key commodity markets and analyses the factors that contributed to fluctuations in commodities prices in 2015. On the whole, prices of commodities, except for some products such as tea, cocoa and cotton, continued a downward trend that had started in 2011. The global commodities rout poses a serious threat to commodity-dependent developing countries in terms of export earnings, employment and public service provision. Moreover, if low levels of fossil fuel prices persist, this may become a disincentive to the development of renewable energy, hampering global efforts to achieve development that is more environmentally sustainable. The adverse impacts of declining global commodity markets on the world economy, particularly on the economies of commodity-dependent developing countries, could be addressed if pragmatic policies such as economic diversification were adequately implemented. Addressing these issues is critical for the sustainability of the global economy, especially in view of the recently adopted Sustainable Development Goals, whose purpose is to "leave no one behind". The present paper, therefore, explores some policy issues related to the recent developments in global commodity markets and suggests recommendations that could help commodity-dependent developing countries achieve sustainable development and inclusive growth.

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Introduction

1. The Accra Accord (paragraph 208) mandated the Trade and Development Board of the United Nations Conference on Trade and Development (UNCTAD) to establish a multi-year expert meeting on commodities and development. This mandate was reiterated in the Doha Mandate (paragraph 17), which extended it from 2013 to 2016. The current expert meeting is the last of the cycle, pending renewal of the mandate by the upcoming fourteenth session of the Conference.

2. This paper analyses commodity market developments during 2015 with a special focus on price trends and the underlying causes of price fluctuations. It also highlights some policy issues associated with recent market developments and draws lessons in the form of policy recommendations to assist commodity-dependent developing countries in their efforts to achieve inclusive economic growth and sustainable development. This paper groups commodities into three categories, namely food and agricultural commodities;[1] minerals, ores and metals; and energy.[2]

I. Recent developments in commodity markets

A. Overview

3. Broadly speaking, commodity markets suffered a continuing price slump throughout most of 2015 caused primarily by the following factors: oversupply; slowing demand, especially for minerals and metals, in China and other emerging economies;[3] faltering economic recovery in advanced economies such as Japan and the European Union; and a strong United States dollar. The UNCTAD non-oil nominal commodity price index[4] averaged 194 points in October 2015 from nearly 219 points in January 2015, a decline of 25 points in only 10 months. Since the peak observed in February 2011, there has been a general decline in non-oil commodity prices. Price indices for food; agricultural raw materials; and minerals, ores and metals that make up the index have followed the same pattern since 2011 (figure 1).

4. During 2015, the prices of most commodities fell. For example, in January 2015, the price of wheat (hard red winter No. 2) was $261, decreasing to $218 in October 2015. A similar trend could be observed for maize and rice. Prices for beverages such as robusta coffee followed the same pattern. Raw materials, especially tropical timber, also experienced declining prices. By contrast, cotton experienced a moderate price recovery from January–October 2015, while the prices of cocoa and tea remained elevated over the same period, compared with those of the previous year.

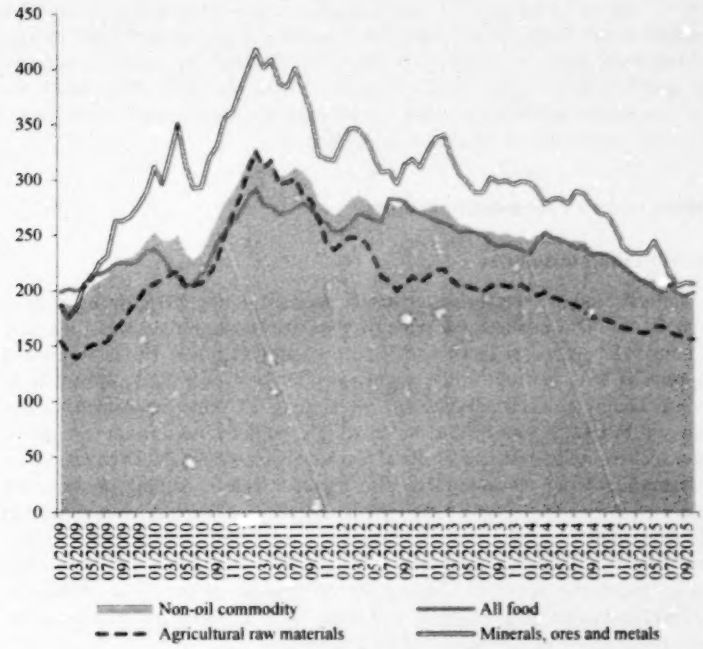
[1] Food, tropical beverages, vegetable oil seeds and oils, and agricultural raw materials.

[2] Oil, gas, coal and renewable energy.

[3] For example, China's merchandise imports decreased by 2.2 per cent in the second quarter of 2015 (year on year). This was partly driven by reductions in quantities of metals such as iron and steel (less 10 per cent) and copper (less 6 per cent). See World Trade Organization, 2015, Falling import demand, lower commodity prices push down trade growth prospects, 30 September, available at www.wto.org/english/news_e/pres15_e/pr752_e.htm, accessed 18 January 2016.

[4] The index covers the following subgroups: all food (food, tropical beverages, vegetables, oilseeds and oils); agricultural raw materials; and minerals, ores and metals.

Figure 1
UNCTAD non-oil commodity price index and its major components, January 2009–October 2015
(2000 = 100)



Source: UNCTAD secretariat calculations based on data from UNCTADStat.

5. The UNCTAD all-food price index also declined from 222 points in January 2015 to 198 points in October 2015. Prices for individual food and agricultural products experienced a downturn as a result of high supply and large stocks accumulating over the years. A possible upward price risk in 2016 is El Niño, which could cause abrupt changes in the weather, bearing negative consequences on global agricultural production. However, in the short term, the most likely price scenario for food and agricultural commodities remains a downward trend or stability amid comfortable levels of stocks. However, stock-to-use ratios will have to be monitored carefully, given the projections of adverse impacts of El Niño on many agricultural products.[5]

6. The markets for minerals, ores and metals also exhibited a trend of declining prices, extending into 2015. This was based on a number of factors such as growth deceleration in China and emerging economies; the fragile economic recovery in developed economies such as Japan and the European Union; high production capacity resulting from large investments made during the last decade-long commodity boom; a strong United States dollar and low-cost mining, partly supported by low energy prices.

[5] For example, the Food and Agriculture Organization of the United Nations estimates world stock-to-use ratio for cereals at 25.3 per cent for 2014/2015, compared with 23.6 per cent and 21.8 per cent for 2013/2014 and 2012/2013, respectively. See http://www.fao.org/worldfoodsituation/csdb/en/?fb_locale=zh_HK, accessed 11 January 2016.

7. Fossil fuel markets, including crude oil, coal and natural gas, continued to record low prices in 2015 because of excess supplies, which helped build large inventories amid weakening demand growth. Renewable energy has continued its growth but its share in the global energy mix remains low. Furthermore, if cheap fossil fuels prices persist, the situation could be a challenge for the development of renewables due to their competiveness as sources of energy. This issue persists at a time when world leaders have reached an ambitious agreement for environmentally sustainable growth during the twenty-first session of the Conference of the Parties to the United Nations Framework Convention on Climate Change held in Paris from 30 November to 11 December 2015. As argued in the conclusion of this paper, achieving a more environmentally sustainable growth would undoubtedly require supporting the renewable energy sector.

B. Developments in key commodity sectors

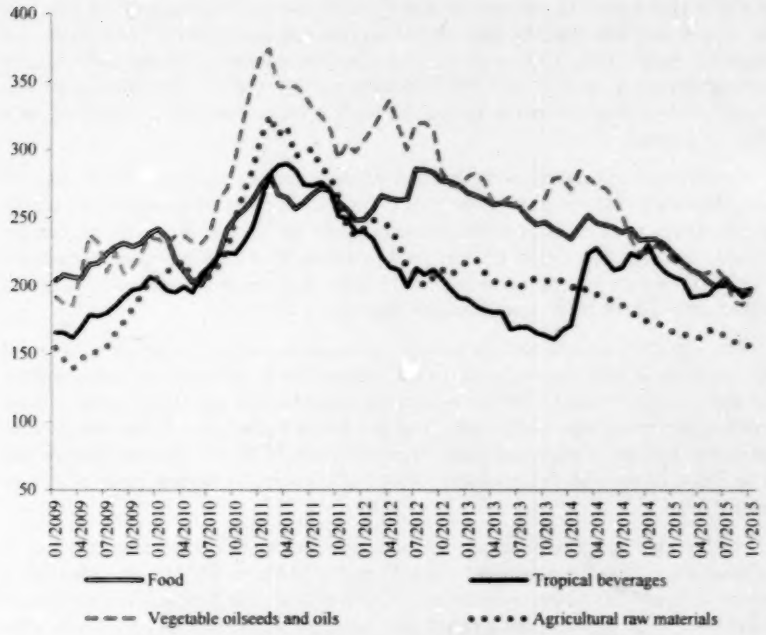
1. Food and agricultural commodities

8. In agricultural food markets, prices generally declined during 2015, owing to good harvests (figure 2). In grain markets, the price of Thai rice (white milled and 5 per cent broken) slid from $410 per ton in January to $360 per ton in October. The latter price is about half its peak of $615 per ton, which was reached in September 2011. According to the International Grains Council, despite the developing El Niño phenomenon, rice production has still benefited from favourable growing conditions. As a result, exports of major countries such as India, Pakistan, Thailand and Viet Nam were stable. The release by the Thai Government of rice stockpiles has also played a role in putting prices under downward pressure. Africa and Asia are the main consumers of rice. Africa imported an estimated 14.6 million tons of rice, while Asia imported about 20.7 million tons of rice in 2015.[6] Asian countries are at the same time key suppliers and consumers of rice, while African countries are mainly importers. Among the major importers of rice in Africa are Côte d'Ivoire and Nigeria. In Asia, suppliers are China, India, Thailand and Viet Nam; the main importers in the region are Indonesia and the Philippines.

[6] International Grains Council, 2014, Five-year global supply and demand projections, available at http://www.igc.int/en/downloads/grainsupdate/igc_5yrprojections2014.pdf, accessed 20 January 2016.

Figure 2

Price indices of selected agricultural commodity groups, January 2009 – October 2015
(2000 = 100)



Source: UNCTAD secretariat calculations based on data from UNCTADStat.

9. The price of wheat (hard red winter No. 2) decreased by 16 per cent (see paragraph 4). This drop was underpinned by increases in global production, mainly driven by China, the European Union, the Russian Federation and Ukraine. For example, in the European Union, production rose from 143.1 million tons in 2013/2014 to 154.1 million tons in 2014/2015. In the Russian Federation, it increased from 52.1 million tons to 59.7 million tons.[7] Similarly, production in Ukraine increased from 22.3 million tons to 24.1 million tons and from 121.9 million tons to 126.2 million tons in China during the same period.[8]

10. Sugar prices also followed a declining trend. The free-on-board price of sugar stowed at Caribbean ports dropped from 15.34 cents per pound in January 2015 to 11.5 cents per pound in August 2015. This was due to a persistent surplus of production over consumption during the last four to five years. The price outlook in the sugar market will be determined by the expected bad weather due to El Niño, which may affect sugar cane plantations in countries such as Brazil and Thailand, and could lead to a price increase. For example, in October 2015, the price of sugar rebounded to nearly 14 cents per pound.

[7] Ibid.
[8] Ibid.

11. The prices of tropical beverages followed divergent paths in 2015. Coffee prices remained relatively high in 2014, driven primarily by a drought in Brazil. Subsequently, however, coffee prices fell as a result of improved weather conditions, strong exports boosted by the weakening of major producing countries' currencies such as the Brazilian real and the Colombian peso, and moderate growth in global demand. In October 2015, the composite indicator price of the International Coffee Organization averaged 118 cents per pound, 32 per cent less than the peak of 173 cents in October 2014. In tea markets, the Mombasa tea price averaged 339 cents per kilogram from January to October 2015, almost 45 per cent higher, compared with the equivalent period of 2014. The price surge was largely driven by reduced output in Kenya, the world's biggest exporter of black tea, as a result of dry weather.

12. Cocoa prices trended upwards, though with short-term swings, from 132.5 cents per pound in January to 145 cents in October 2015. This increase was driven mainly by supply disruptions in Ghana after disappointing harvests, partly due to problems in the application of pesticides and fungicides. Côte d'Ivoire produced about 1.79 million tons of cocoa beans in 2014/2015, up from 1.75 million tons in 2013/2014. Production in Ghana was estimated at 740,000 tons in 2014/2015, down from 897,000 tons in 2013/14.[9]

13. The vegetable oilseed and oil markets followed declining trends, owing to good supply conditions in major producing countries, namely Brazil, Indonesia, Malaysia and the United States of America. In countries such as the United States and Brazil, where a large share of production has been traditionally used to produce biofuel, this activity has become less profitable because of declining crude oil prices. The UNCTAD vegetable oilseeds and oil price index dropped to 196 points in October 2015 from its highest point of 374 in February 2011.

14. With regard to agricultural raw materials, prices of tropical logs, especially sapele from Cameroon, followed a downward trend. They dropped from $407.61 per cubic metre in January 2015 to $393.30 per cubic metre in October 2015. The Tropical Timber Market Report of January 2015 noted that a progressive depletion of the stockpile in Douala Port was an indication of increasing supply, explaining the price decline. Efforts by the Malaysian Government to curb the illicit trade in wood and the Cameroonian plan to ban log exports in January 2016 are expected to push prices upwards. Hence, there could be a reversal in the price trend in the timber market.

15. The price of rubber (TSR No. 20) per ton dropped from $1,697 in January 2015 to $1,473 in October 2015. This represents a 13 per cent decrease. Observers associate this trend with the economic crisis in the European Union, which has reduced households' purchasing power, limiting their capacity to make major expenditures such as buying a car. Despite recovery in some European countries – Belgium, Hungary, Italy, Poland, Romania and Spain, for example – demand for rubber is slow, and the price has declined, despite a slowdown in production due to adverse weather conditions in Malaysia, one of the leading producers.[10] In Asia, particularly in China, one of the main consumers, consumption has also slowed down. Only Japan has shown some signs of recovery in the rubber market.[11]

16. Cotton is one of the rare commodities to have experienced a price increase in 2015, although prices remain low compared with previous years, particularly at their peak of 229.67 cents per pound in March 2011. The Cotlook A index rose from 67.35 cents per pound in January 2015 to 69.03 cents per pound in October 2015. This was a surprising development, since China had started to sell part of its stock that had accumulated over the

[9] International Cocoa Organization, 2015, *Quarterly Bulletin of Cocoa Statistics*, Cocoa Year 2014/2015, Vol. XLI, No. 4.

[10] The Economist Intelligence Unit, April 2015.

[11] The Economist Intelligence Unit, July 2015.

years. Observers feared that by flooding the cotton market with its stocks, China would significantly decrease prices; this has not happened so far. A possible explanation could be that while China has been increasing its supply, demand rose at a higher pace from major consumer countries such as China itself – a supplier and heavy consumer at the same time – India and Pakistan.

2. Minerals, ores and metals

17. Mineral, ore and metal prices are sensitive to various factors: global supplies, which depend mainly on production capacities and mining costs; global demand driven by industrial activities in developed and emerging economies; and geopolitical tensions. More specifically, macroeconomic developments in China, which accounts for almost half of global metal consumption, have had a significant impact on the market for minerals, ores and metals. Furthermore, monetary policy in the United States tends to affect the prices of most minerals and metals, as they are priced in dollars.

18. The UNCTAD minerals, ores and metals price index[12] peaked to nearly 418 points in February 2011, but has on the whole decreased over the following months, with short-term fluctuations. In October 2015, the price index averaged 206 points, half of the peak level of February 2011 (figure 3). The continued falling prices of minerals, ores and metals can be attributed to a number of factors:

(a) Growth deceleration in China and emerging economies;[13]

(b) Fragile economic recovery in developed economies such as the European Union and Japan;

(c) High production capacity resulting from large investments made during the last decade-long commodity boom;

(d) Increasing strength of the United States dollar;

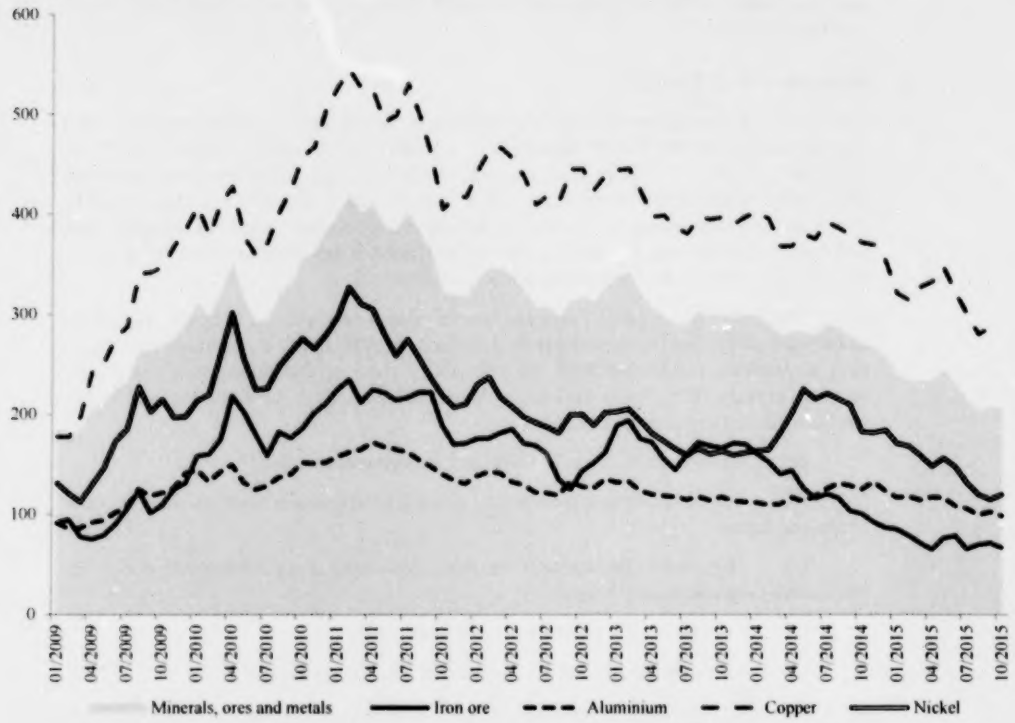
(e) Low-cost mining, partly supported by low energy prices.

19. Moreover, structural economic changes occurring in China, as it moved from investment-led growth to a consumption-driven economy, combined with the country's objective to achieve a less polluting economic model, have put products such as iron ores and steel under downward pressure. By contrast, the expected positive impact of China's economic rebalancing on metals, such as zinc and aluminium, has been subdued to date amid strong supply and the country's slower economic growth relative to the past several years.

[12] Covers copper, aluminium, iron ore, nickel, lead, zinc, tin, phosphate rock, manganese ore and tungsten ore. Gold is not included.

[13] For example, China's merchandise imports decreased by 2.2 per cent in the second quarter of 2015 (year on year). This was partly driven by drops in quantities of metals such as iron and steel (minus 10 per cent) and copper (minus 6 per cent). See www.wto.org/english/news_e/pres15_e/pr752_e.htm, accessed 18 January 2016.

Figure 3
Price indices of selected minerals, ores and metals, January 2009–October 2015
(2000 = 100)



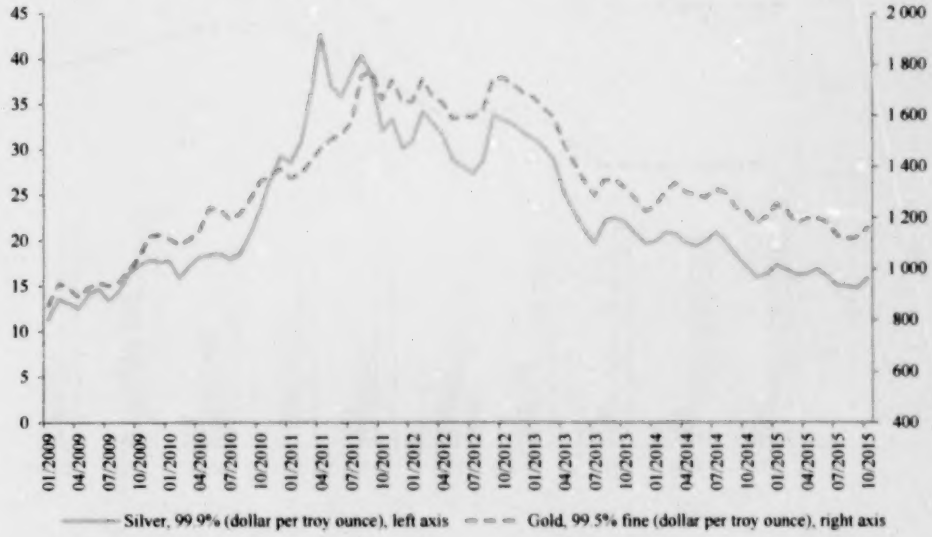
Source: UNCTAD secretariat calculations based on data from UNCTADStat.

20. In specific markets, the price of iron ore, a raw material used for steelmaking, has been declining since its peak in 2011. In October 2015, iron ore prices at the Chinese port of Tianjin averaged $53 per ton, less than a third of its peak of $187 in February 2011. Low iron ore prices are caused by a global glut that is exacerbated by low-cost mining from big producers such as BHP Billiton, Rio Tinto and Vale SA. These occurred at a time when global steel production was recording weak growth, especially in China, which contributed to weighing down global demand for iron ore.

21. Performance of the copper markets was similar to that of global minerals, ores and metals markets. After a peak of $9,867 per ton in February 2011, London Metal Exchange (LME) copper prices have been trending down with short-term fluctuations. For example, in 2015, the price of copper rose from $5,701 to $6,296 per ton between February and May. Thereafter, the price dropped to an average of $5,224 in October, owing to strong supplies amid elevated stocks and slowing global demand, notably from construction and infrastructure sectors in China. Moreover, demand for substitutes, such as relatively lower-priced aluminium, which averaged $1,524 per ton in October 2015, compared with a peak of $2,662 in April 2011, contributed to weighing down demand for copper.

22. For nickel, an ingredient used in the production of stainless steel, prices in 2015 were lower than in the first half of 2014, as buyers accumulated stocks before January 2014 when the export ban by Indonesia came into force.[14] Moreover, China, a big player in the market, was able to partly replace imports from Indonesia with imports from the Philippines, reducing pressure on prices. In October 2015, the LME nickel price averaged $10,341 per ton. In 2016, the price of nickel will most likely depend on market fundamentals, especially the capacity of exporting countries such as the Philippines to supply international markets. An important upward risk factor for nickel prices is significant cutbacks from miners, as current price levels are estimated to be below their breakeven costs.

Figure 4
Nominal prices of gold and silver in dollars per troy ounce, January 2009–October 2015



Source: UNCTAD secretariat calculations based on data from UNCTADStat.

23. Prices of precious metals have also declined, though with short-term swings, and are now at much lower levels than in 2011 and 2012 (figure 4). Silver prices have generally declined from the high levels of over $27 per troy ounce that prevailed between December 2010 and March 2013. In October 2015, the price of silver averaged $16 per troy ounce. Over the same period, the price of gold averaged $1,159 per troy ounce, compared with values of over $1,500 between May 2011 and March 2013. Key driving forces of the continued decline in the prices of silver and gold include slowing global demand, the strengthening United States dollar and the expectation that interest rates will rise in the United States[15] as the macroeconomic situation of the country improves. With regard to gold, sizeable outflows from exchange-traded funds contributed to exacerbating the

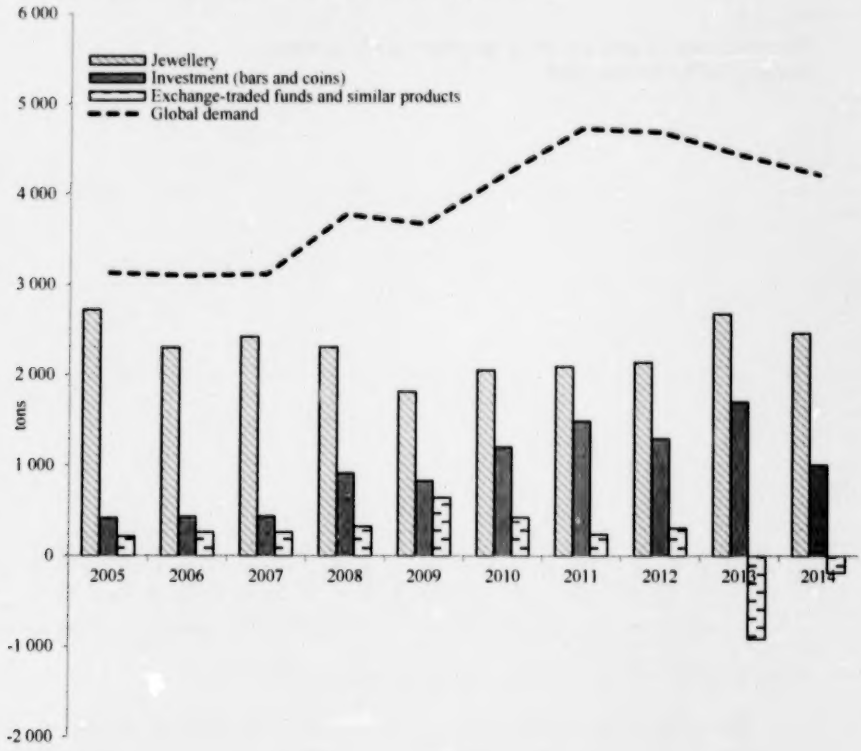
[14] From January 2014, Indonesia, the world's leading nickel producer, placed an export ban on unprocessed nickel ores, a measure designed primarily to encourage domestic processing. However, it spurred supply concerns immediately after it came into force. As a result, between January and July 2014, the LME nickel price per ton increased by 35 per cent, from $14,076 to $19,047.

[15] The United States Federal Reserve Bank increased its interest rate in December 2015.

downward price trend. For example, the outflows were estimated at 916.3 tons and 184.2 tons, respectively, in 2013 and 2014 (figure 5). In the case of silver, weakening demand from the electronic sector as a result of a continued shift toward smaller mobile devices contributed significantly to pushing metal prices down in 2015. [16] Prices of precious metals such as gold and silver are expected to remain sensitive to market fundamentals, financial investments, United States monetary policy and geopolitical tensions.

Figure 5

Global and selected components of gold demand, 2005–2014



Source: UNCTAD secretariat calculations based on data from the World Gold Council, 2015, Gold Demand Trends, Second quarter 2015.

3. Energy

24. For most of 2015, energy prices remained globally under downward pressure, albeit with some upward swings between January and May that resulted mainly from a surge in oil prices relative to their level in the second half of 2014 (figure 6). For example, from a peak of 131 points in June 2014, the World Bank energy price index halved to 63 points in

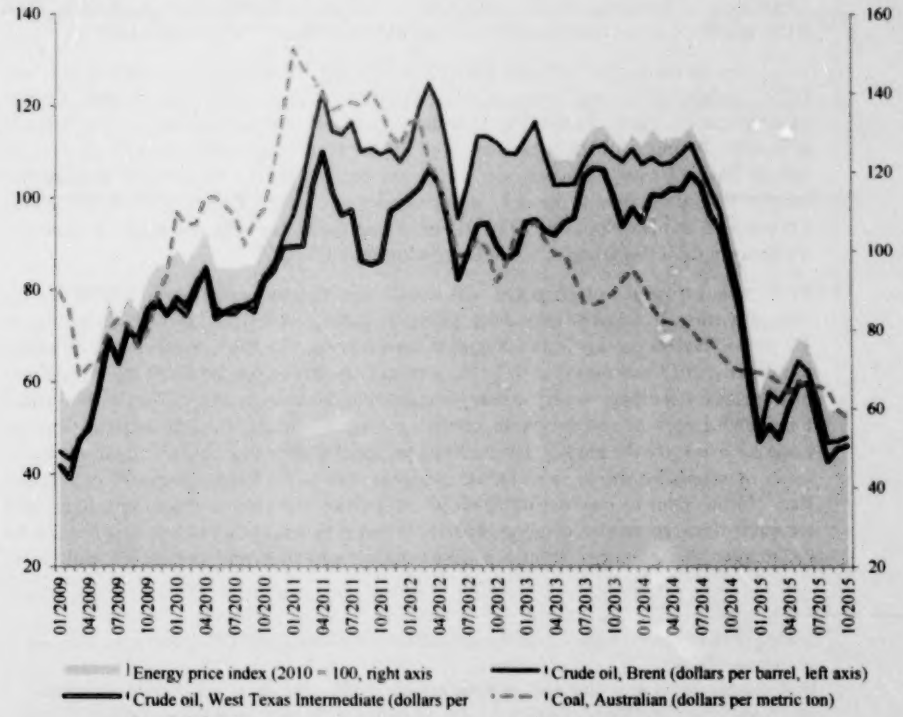
[16] See https://www.silverinstitute.org/site/2015/11/17/thomson-reuters-releases-interim-silver-market-review, accessed 11 February 2016.

January 2015,[17] owing mainly to excess supply associated with the boom in United States shale oil production. Subsequently, producers were forced to rethink their investment strategies, with many of them cancelling, delaying or reducing new investments. This situation, combined with geopolitical tensions in the Middle East and indications of economic recovery in the United States, raised concerns over global energy supply, especially for crude oil. This contributed to driving up prices during the first half of 2015. The energy price index rose by almost 25 per cent from January to 78 points in May 2015. However, the effect of these factors on energy prices was short-lived, as the trend of energy prices reversed, starting in May. By October 2015, the Index had dropped to nearly 60 points. The main reasons for the reversal include continued strong supply from top crude oil producing countries such as the Russian Federation and Saudi Arabia even at lower prices to secure their market shares; expected weaker growth in global demand; and anticipation of rising Iranian oil exports sometime in 2016.[18]

Figure 6

Energy price index and nominal prices of crude oil (Brent), West Texas Intermediate and coal (Australia), January 2009–October 2015

(2010 = 100)



Source: World Bank database.

[17] World Bank, 2015, Commodity markets, available at http://www.worldbank.org/en/research/commodity-markets, accessed 22 January 2016.

[18] In the Oil Market Report of October 2015, the International Energy Agency (IEA) estimated that crude oil production from the Islamic Republic of Iran would reach 3.6 million barrels per day in 2016, compared with 2.9 million barrels per day in 2015. See https://www.iea.org/oilmarketreport/reports/2015/1015/, accessed 1 February 2016.

4. Crude oil

25. The slump in crude oil prices that ran from mid-2014 to early 2015 continued. Between June 2014 and January 2015, the price per barrel for Brent and West Texas Intermediate crude fell respectively from $112 and $105 to $48 and $47. The price slumps were driven primarily by excess supply resulting from strong production from members and non-members of the Organization of Petroleum Exporting Countries (OPEC), as well as considerable increase in shale oil output, especially in the United States, in a context of slow demand growth. Moreover, the accumulation of record short positions by financial speculators is likely to have exacerbated the downward trend and substantially added to volatility of oil prices.[19] Thereafter, the downward trend in crude oil prices reversed from February until mid-2015. In May 2015, Brent averaged $65 per barrel, whereas West Texas Intermediate recorded roughly $60 per barrel in June 2015. This price surge was associated with many factors. These included an extremely cold 2014/2015 winter in the northern hemisphere, supply concerns,[20] signs of improvement in the United States economy and persisting geopolitical tensions in the Middle East. Also, demand from China remained strong in 2015 as the country continued to build its strategic reserves.[21] However, continuing strong supply and high levels of stocks amid lacklustre demand growth contributed to reversing the price trends from their peaks in mid-2015. In October 2015, Brent and West Texas Intermediate averaged $48 and $46 per barrel, respectively.

26. Strong oil supply is being underpinned by high production from OPEC and non-OPEC member countries,[22] even at low prices, as oil exporters primarily seek ways to preserve market shares. In the first three quarters of 2015, global oil supply was estimated at roughly 96 million barrels per day, with OPEC producing nearly 40 per cent, and the former Soviet Union, 14.5 per cent. Crude oil demand during the same period reached roughly 94 million barrels per day, with countries outside the Organization for Economic Cooperation and Development (OECD) accounting for 51 per cent, and nearly a quarter of the demand from this group of countries coming from China.[23]

27. It is expected that oil prices will remain sensitive to market developments. At the time of writing, IEA had projected that global demand growth would slow down in 2016 to 1.2 million barrels per day from 1.8 million barrels per day in 2015. According to its supply projections, 2015 was expected to be the second consecutive year of declining investments in oil production capacity, a trend that is expected to continue in 2016. This situation could force higher-cost oil producers in countries such as Brazil, Canada and the Russian Federation to leave the market. The resulting potential decline in global oil output should be offset by supply growth in some OPEC countries such as the Islamic Republic of Iran and Iraq.[24] In the short to medium term, oil prices are not expected to record any significant rebounds if current market conditions persist – that is to say, if excess supply is boosted by the market share strategy from top oil-producing countries and is coupled with weak

[19] See http://www.reuters.com/article/us-hedgefunds-oil-kemp-idUSKBN0TX24120151215, accessed 11 February 2016.

[20] High-cost producers were squeezed out of the markets, while others cancelled, delayed or reduced investments in new projects, following the low prices prevailing throughout the second half of 2014. Since 2014, the continuing decline in oil prices has caused delays in project implementation estimated at $400 billion of capital expenditure in Angola, Canada, Kazakhstan, Mozambique, Nigeria and the Gulf of Mexico. This is equivalent to about 27 billion barrels of oil per day (*Financial Times*, 2016, Delayed oil projects total nears $400bn, 14 January).

[21] Natixis, 2015, Commodities Report: Global Oil Market Update, No. 8, 27 November.

[22] Examples of OPEC countries are Iraq, Saudi Arabia and the United Arab Emirates; non-OPEC countries include Canada, the Russian Federation and the United States.

[23] IEA, 2015, Oil Market Report, October.

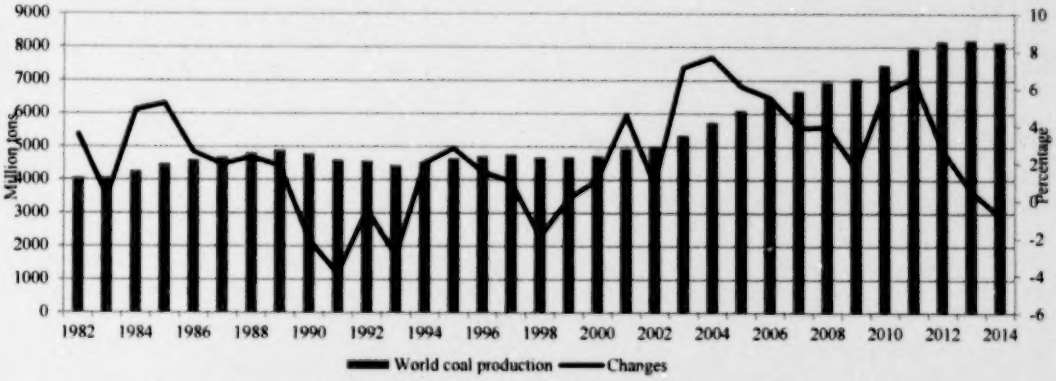
[24] IEA, 2015, *World Energy Outlook 2015*, Paris.

demand growth. For example, the *World Energy Outlook 2015* forecasts oil prices to remain at about $50–$60 per barrel until 2020.

5. Coal

28. After crude oil, coal is the second-largest source of primary energy, representing roughly 30 per cent of global primary energy produced. It is mostly used for power generation, producing more than 40 per cent of worldwide electricity. Coal is abundant, cheap and easy to trade, but carbon intensive and therefore produces adverse climate effects. Its price has plummeted since its peak in 2011. For example, Australian thermal coal, the main benchmark for the Asian market, traded at nearly $52 per ton in October 2015, less than half of its highest level ($132 per ton) in January 2011. Current low coal prices and environmental concerns have put pressure on producers to reduce output. In 2014, for the first year since 1999, global coal production decreased, compared with 2013 (figure 7).

Figure 7
World coal production levels and annual changes, 1982–2014
(Percentage)



Source: UNCTAD secretariat calculations based on data from *BP Statistical Review of World Energy 2015*.

29. In the coming years, global ambitions for a less polluting economic growth process consonant with the Paris Agreement (2015), as well as commitments of industrialized economies to phase out carbon emissions by the end of the century, will maintain downward pressure on coal demand and production. However, the situation is uncertain for most developing countries, for which coal is one of the most affordable sources of energy. Lowering coal use and demand in these countries will be a major challenge unless they receive adequate compensatory support such as subsidies and conducive regulatory frameworks.

6. Natural gas

30. Natural gas prices vary considerably between the different pricing regions of the world, as shown in figure 8.[25] In the United States, Henry Hub natural gas spot prices

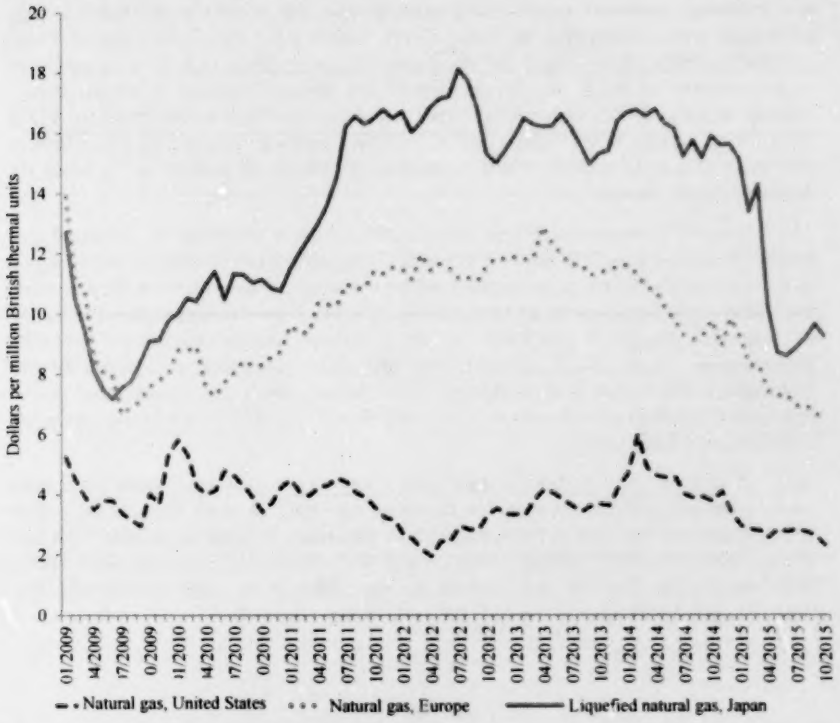
[25] In the United States, prices result from market fundamentals. In Asia, gas prices are derived from contracts on purchases of gas but they take into account oil prices. In Europe, the pricing system used to be similar to the Asian system but it has changed recently to supply-and-demand pricing (TD/B/C.I/MEM.2/22).

remained below $3 per million British thermal units (mBtu) from January to October 2015. This is very low compared with the peak of nearly $6 per mBtu recorded in February 2014. This low price stemmed from weak demand, low oil prices and high stocks. For example, natural gas production in the United States reached a record level of 3,929 billion cubic feet at the end of October 2015 which is above the five-year average (2010–2014) of 3,782 billion cubic feet.[26]

31. The price of natural gas at the spot-traded gas market of the National Balancing Point (United Kingdom of Great Britain and Northern Ireland), which is used to benchmark the price in the United Kingdom and continental Europe, has also been in decline. It reached $6.43 per mBtu in October 2015, compared with nearly $10.00 at the end of 2014. A similar downward trend, if not more pronounced, was also observed for prices of Japan liquefied natural gas, which are linked to oil-indexed contracts. These prices fell from $15.00 per mBtu in January 2015 to $9.00 in October 2015. The outlook for natural gas is more likely on the downside, as large inventories across the world are associated with strong supply and weak demand growth, as well as low prices for other competing energy products.

[26] United States Energy Information Agency, 2015, Natural gas weekly update, 12 November, available at http://www.eia.gov/naturalgas/weekly/archive/2015/11_12/index.cfm, accessed 22 January 2016.

Figure 8
Nominal prices for natural gas from the United States and Europe, and liquefied natural gas from Japan
(Dollars per million British thermal units)



Source: World Bank, Commodity markets, available at http://www.worldbank.org/en/research/commodity-markets, accessed 15 December 2015.

7. Renewable energy

32. Developments in renewable energy markets are driven by factors such as security, local or global pollution and decarbonization objectives. Changes in fossil fuel markets also affect those of renewable energy because of their competitiveness as sources of energy. For example, oil and biofuel may compete for transport and heating sectors. Hence, renewables such as biofuels are particularly competitive during periods of high and volatile fossil fuel prices. As a result, the current context of depressed energy prices raises concerns about the competitiveness of renewable energy sources. However, topical issues, including environmental concerns, energy security and efforts to enhance cost-competitiveness of renewables, should contribute to supporting their development. At a time when the role of sustainable energy systems has become central to debates on sustainable development, as evidenced by the recently adopted 2030 Agenda for Sustainable Development and the Paris Agreement, policies to support the development of renewable energy are being debated at the national, regional and international levels.

33. In 2014, consumption growth remained strong This has contributed to the robust growth of renewable energy sources: in 2014, they accounted for almost half of the world's

new power generation capacity and are currently the second largest source of electricity after coal.[27] This momentum should continue, and renewables are expected to be the largest source of net addition to power capacity by 2020.[28] The growth in renewable energy can be partially explained by its expansion in emerging and developing economies, owing to several factors. For example, China's energy needs, coupled with its objective to achieve a less polluting economic model, have been driving the country's renewable energy production and consumption. In India, energy demand, led by expectations of strong economic growth, has sustained the development of renewables such as solar and wind energy systems. In Brazil, the development of the renewable energy sector has been a response to the country's vulnerability to adverse weather patterns such as droughts, which often hit the country's hydropower sector. In other countries, such as Ethiopia, Morocco and South Africa, the need to reduce dependence on volatile oil markets is supporting the renewable energy sector.

34. Progress in renewable energy sources has also been facilitated by enhanced cost competitiveness – including that of renewable power generation brought by technological advances – and significant policy support, which has attracted investments in the sector and has further made it possible to attain economies of scale. The decreasing cost of production of renewable energy is illustrated by the levelized cost of electricity [29] of solar photovoltaics, which halved between 2010 and 2014, according to a report by the International Renewable Energy Agency.[30] The report stated that biomass for power, hydropower, geothermal and onshore wind could provide competitive electricity, compared with fossil fuel-related energy.

35. In terms of market share of renewable energy, hydropower has been the leading source of energy, although its share has decreased over the past years, from 91 per cent in 2000 to nearly 69 per cent in 2014. Meanwhile, the shares of wind and biofuel increased sharply, while those of geothermal, biomass and other renewables remain relatively stable. Solar power generation has also been on the rise, although its share remains relatively small, compared with other sources of renewable energy (figure 9).

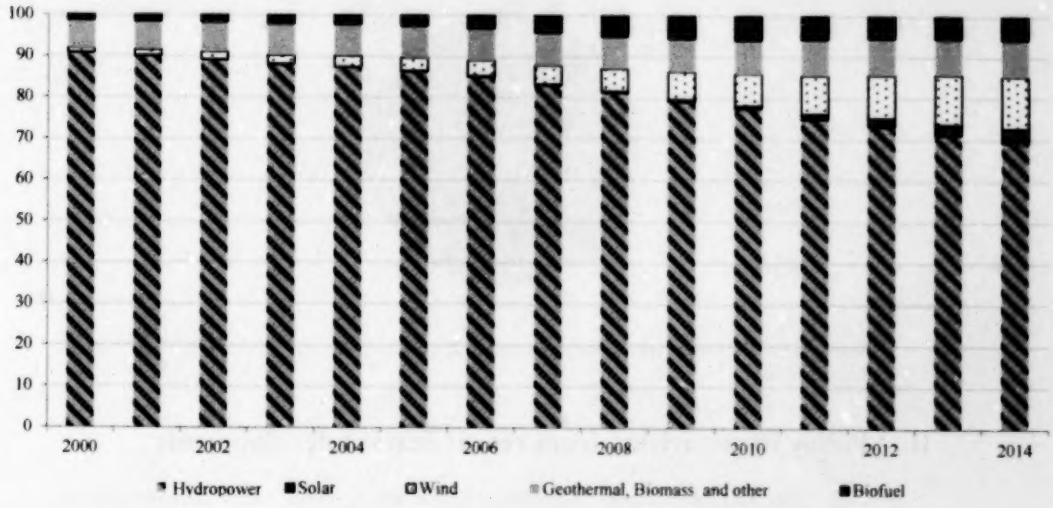
[27] IEA, 2015, *Renewable Energy Medium-Term Market Report 2015*, Paris, available at https://www.iea.org/Textbase/npsum/MTrenew2015sum.pdf, accessed 18 January 2016.

[28] Ibid.

[29] Levelized cost of electricity is a summary measure of the overall competiveness of different generating technologies. It represents the per-kilowatt-hour cost of building and operating a generating plant over an assumed financial life and duty. See https://www.eia.gov/forecasts/aeo/electricity_generation.cfm, accessed 21 January 2016.

[30] International Renewable Energy Agency, 2015, *Renewable Power Generation Costs in 2014*, available at http://www.irena.org/menu/index.aspx?mnu=Subcat&PriMenuID=36&CatID=141&SubcatID=494, accessed 21 January 2016.

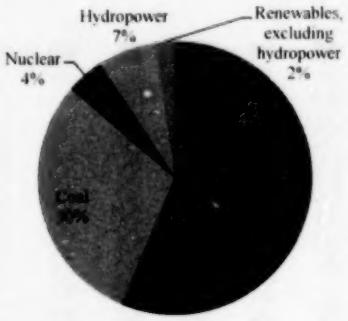
Figure 9
World renewable energy consumption by type, 2000–2014
(Percentage)



Source: UNCTAD secretariat calculations based on data from the *BP Statistical Review of World Energy 2015*.

36. Notwithstanding the progress made in promoting renewable energy sources, their share in the global energy mix is still small. For example, the share of renewables, including hydropower, represented about 9 per cent of the global primary energy mix in 2014 (figure 10). This implies that the future of renewable energy will continue to depend on supportive polices in terms of subsidies to the industry, as well as a strong legal framework in the face of today's challenging environment, characterized by low fossil fuel prices. This is critical not only in addressing climate change concerns but also because renewables have the potential to create economic opportunities in terms of investments and job creation. Moreover, compared with fossil fuel energy, renewable energy can easily contribute to making energy available to the world's poorest communities, in particular in low and middle-income countries. Furthermore, promoting renewable energy should be considered as a way for net oil-importing or energy-insecure countries to reduce their dependence on highly polluted fossil fuel markets consonant with the Paris Agreement.

Figure 10
Global energy mix, 2014



Source: UNCTAD secretariat calculations based on data from the *BP Statistical Review of World Energy 2015*.

II. Policy issues arising from recent market developments

37. This section discusses some major issues arising from recent developments in commodity markets and makes some policy suggestions about the way forward. This discussion is of particular relevance to commodity-dependent developing countries at a time when implementation of the 2030 Agenda for Sustainable Development has several implications for the commodity sector (box).

Sustainable Development Goals: Implications for commodity-dependent developing countries

On 25 September 2015, the United Nations General Assembly adopted the 2030 Agenda for Sustainable Development.[31] Achieving the 17 goals and 169 targets of this Agenda directly through commodities sector development, or indirectly through sectoral linkages, would require relevant policy strategies. This box explores some of the strategies that can help commodity-dependent developing countries realize the full potential of their commodity sectors and contribute to achieving the Sustainable Development Goals at a time when depressed commodities prices are undermining the economic performance of these countries.

Goal 1 (poverty eradication) and its targets do not explicitly mention commodities but are linked to developments in the commodities sectors of commodity-dependent developing countries. The main argument is that these countries depend heavily on commodities, for example, in terms of government expenditures, employment and household incomes. In particular, increasing employment and household incomes are important channels of poverty eradication. Furthermore, fostering the development of agriculture through supportive policies for the smallholder farmers who produce most of the food and agricultural exports in those countries will contribute to achieving not only Goal 1 but Goal 2 (food security) as well.

Goal 5, target 5.a, calls for reforms that provide equal rights to women and men, including access to natural resources. To close the gender gap in commodity-dependent

[31] See A/RES/70/1.

developing countries, policies could, for instance, give priority to women in resource allocation or at least guarantee equal opportunities to women and men in accessing resources such as land, finance and technologies. For example, through its land registration programme, Rwanda has made progress in this area by providing land titles to women who otherwise had no ownership claim on the land they had been working on.

Achieving Goal 7 (affordable and sustainable energy) implies fostering the development of accessible renewable sources of energy that will in turn help combat climate change (Goal 13). As discussed in this paper, the depressed fossil fuel markets may hamper efforts to embark on the energy transition, particularly in developing economies. For these economies, providing supportive policies to their renewable energy sector, including better access to finance and relevant technologies; building an enabling legal environment; and providing subsidies to the renewable industry sector, are possible actions that could help further the achievement of Goal 7. This will also generate economic opportunities in the form of investments and job creation, leading to spillover effects on other Sustainable Development Goals, in particular Goals 1 (poverty eradication), 3 (well-being) and 8 (decent work for all).

For commodity-dependent developing countries, the critical importance of Goal 9 and target 9.b, which refers to the need for industrial diversification and value addition, including in the commodities sector, cannot be over-emphasized. Achieving these objectives will require structural transformation in resource-rich countries moving from their strong dependence on primary commodity exports to the production of manufactured goods and higher-value services.

Heavily commodity-dependent developing countries could draw lessons from the diversity of experiences across developing countries that have managed to diversify their economies. Brazil, Chile, China, Indonesia, Malaysia, South Africa, and Thailand, for example, have successfully pursued a range of diversification and industrialization strategies that have taken account of their country-specific circumstances and the prevailing international economic environment. These strategies have resulted in a growing share of manufactures in these countries' exports and/or a wider range of commodities produced.

Target 10.1, which aims at increasing revenues for the bottom 40 per cent of the population, could be achieved through equitable and efficient investments in job creation in commodity-dependent developing countries.

Goal 12, target 12.2, calls for the achievement by 2030 of the sustainable management and efficient use of natural resources. In this area, Botswana and Chile offer a model for best practices among developing and emerging economies.

All these efforts towards achieving long-term sustainable development, particularly in commodity-dependent developing countries, will require effective policy collaboration at the national, regional and global levels. As such, international policy coordination will be critical.

A. Supporting vulnerable producers to help them cope with declining agricultural commodity markets

38. As highlighted in this paper, food and agricultural commodity prices have been experiencing a downward trend for several years now. These developments are detrimental to producers, especially small-scale farmers, who are the backbone of agricultural food and non-food production in developing countries.[32] The small scale of their activities makes them vulnerable to depressed prices, which erode their economic viability.

39. To mitigate the negative effects of low prices on these farmers, commodity-dependent developing countries should implement measures that would enable them to reduce production costs so that they remain competitive in agricultural commodity markets. In particular, they need access to low-cost productive assets, such as land; agricultural inputs, such as fertilizers and seeds; and affordable credit. Moreover, assistance should be extended to small farmers to ensure that they have the necessary skills and ability to benefit from market participation. For these farmers, assistance should help them become sustainable small businesses. This should be considered a way of addressing social problems, particularly poverty and inequality, which keep large parts of populations at the margin of economic progress.[33] This is of particular importance as the world community starts implementing the 2030 Agenda for Sustainable Development centred on the Sustainable Development Goals.

40. Goal 2 of the 2030 Agenda for Sustainable Development is to achieve food security and improved nutrition. Commodity-dependent developing countries are advised to devote more policy attention and resources to the agricultural sector. Achieving such objectives will also require particular attention this year, considering the threats linked to El Niño. According to the Food and Agriculture Organization of the United Nations, 25 per cent of all damage caused during natural disasters such as El Niño is in the agricultural sector. El Niño will exacerbate the frequency and impact of floods, heavy rains and droughts from end of 2015 to early 2016 and is expected to cause more damage to agricultural production than in 1997–1998.[34]

B. Building a favourable policy environment to cope with low commodities prices in the extractive industries

41. In extractive industries, low prices of almost all commodities, from minerals and metals to fossil fuels, have divergent implications for commodity-dependent developing countries, depending on whether they are net importers or net exporters of these commodities. For example, the dramatic drop in crude oil prices since mid-2014 has benefited net oil importers, such as Ethiopia, India, Kenya and South Africa, by lowering their import bills. [35]

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[32] The Food and Agriculture Organization of the United Nations estimates that small farmers provide up to 80 percent of the food supply in Asia and sub-Saharan Africa. See http://www.fao.org/fileadmin/templates/nr/sustainability_pathways/docs/Factsheet_SMALLHOLDERS.pdf, accessed 19 January 2016.

[33] For detailed policy measures, see UNCTAD, 2015, *Commodities and Development Report 2015: Smallholder Farmers and Sustainable Commodity Development*, New York and Geneva.

[34] Food and Agriculture Organization of the United Nations, 2016, 2015–2016 El Niño: Early action and response for agriculture, food security and nutrition, Working draft, 2 February, Rome.

[35] H Zhenbo et al., 2015, The oil price shock of 2014, Working Paper, Overseas Development Institute, London; Natixis Oil Review 2015.

42. Conversely, commodity-dependent developing countries have been seriously affected by the sharp decline in other commodities prices. This effect has manifested itself in the form of macroeconomic impacts, including worsening fiscal deficits, currency depreciations and increasing sovereign risk.[36] For those with high levels of external debt, the risk of default – albeit still relatively low – will increase if commodities prices continue their decline. The price slumps have also been particularly damaging in countries where Governments seem to have poorly anticipated the reversal of the price trend after almost a decade-long boom. For example, according to estimates by the Governor of the Central Bank of Ghana, the drop in the price of gold led to a loss of more than $2 billion in Government revenue between 2012 and 2015.[37] In Algeria and Saudi Arabia, high fiscal breakeven oil prices of $129.8 per barrel and $111.3 per barrel, respectively, in 2014,[38] relative to low oil prices, have forced these countries to cut spending or draw down their reserves to cover shortfalls in Government revenues.

43. The pressure of declining commodity markets on commodity-dependent developing countries calls for strong and effective policy actions. The current situation should provide an opportunity for deeper reflection on policy orientation in which these countries could reduce their dependence on a limited number of commodities. Lessons could be learned from examples of countries that have successfully diversified their economies. For example, Malaysia has successfully diversified its economy both vertically and into non-primary-commodity-driven sectors. The country has effectively moved away from its historical dependence on agriculture and mining products to processing of crops such as palm oil and rubber and to manufacturing of electrical and electronic products.[39] It has invested in increasing value addition in the palm oil sector through research in downstream technologies including through Malaysia Palm Oil Board and universities. Malaysia has also prioritized the implementation of its industrial policy focused on an export-led manufacturing sector. As a result, since the early 2000s, manufactured goods have represented on average about 80 percent of the country's exports.[40] This is even more crucial at a time when the international community is debating on how to attain the Sustainable Development Goals, which underscore the imperative of achieving inclusive and sustainable economic growth and development.

44. In the short and medium terms, improvement in resource allocation, privileging investment in productive sectors rather than consumption, could be a relevant response to the current drop in commodity revenues. Furthermore, being more cautious or less optimistic with respect to the outlook of commodities prices when preparing budgets would help prevent situations where countries need to deal with deep budget deficits when commodities prices suddenly decline. The need to adopt long-term strategies that would help commodity-dependent developing countries build and strengthen their resilience to commodities price swings cannot be overemphasized. For example, investing in the development of their productive capacities and/or saving in good times to be able to ride out the bad times when the prices decline, would make sense. Furthermore, vulnerable commodity-dependent developing countries may need access to international safety-net

[36] In 2015, the currencies of many resource-rich countries, including the Brazilian real, the Colombian peso, the Zambian kwacha, the Angolan kwanza and the Nigerian naira, recorded some of their worst depreciations against the United States dollar in several years.

[37] International Monetary Fund (IMF) Survey Magazine, available at http://www.imf.org/external/pubs/ft/survey/so/2015/POL102015A.htm, accessed 19 January 2016.

[38] IMF, 2015, Regional Economic Outlook Update: Middle East and Central Asia Department, Statistical Appendix, May, available at http://www.imf.org/external/pubs/ft/reo/2015/mcd/eng/mreo0515.htm, accessed 22 January 2016.

[39] A Noh, 2014, Historical institutionalism and economic diversification: The case of Malaysia, *Asian Social Science*, 10(9): 40.

[40] See http://www.matrade.gov.my, accessed 11 February 2016.

programmes provided by international financial institutions and donors through various instruments such as emergency grant funding and loans.[41]

45. Falling commodities prices are also weighing down on the corporate sector with implications on job and investment cuts in commodity-dependent developing countries. Governments of resource-rich countries would benefit from improving their investment environments to attract domestic and foreign investors. For example, helping small and medium-sized enterprises to access finance could boost investment and job creation.

46. In the long term, the need for policies, including economic and fiscal diversification to reduce countries' exposure to the cyclicality of commodity markets, cannot be overstated. Diversification strategies, such as vertical diversification and non-commodity-led growth, could strengthen the resilience of commodity-dependent developing countries to shocks by enabling them to derive their revenues from various sources. These strategies can also help reduce their exposure to the negative effects of unfavourable secular terms of trade (Prebisch-Singer hypothesis).[42]

C. Devising supportive policies for an environmentally sustainable development

47. As discussed earlier, the current context of plummeting prices for fossil fuels has raised concerns about the competitiveness of less polluting sources of energy, including renewable energy, at a time when the critical importance of achieving sustainable and less polluting economic growth is being globally acknowledged. If prices of fossil fuels continue to fall or remain depressed for a long period, the situation could threaten the development of renewable energy; this might in turn compromise the achievement of the Sustainable Development Goals. For example, in late 2015, IEA suggested that crude oil prices hovering around $50 a barrel until the end of the current decade would hold back the development of electric cars and biofuels production that are contributing to efforts aiming to curb carbon emissions. It estimated that about $800 billion of efficiency improvements in cars, trucks and airplanes would be lost under these circumstances.[43] These alarming prospects for renewables mean that supportive policies, including access to finance, improved technologies, a stronger legal environment and subsidies, would need to continue supporting the development of the renewable energy sector.

48. Furthermore, in the face of current declining energy markets, moving away from high polluting fossil fuels such as coal may be a challenging step for most developing countries. For these countries to make the required transition to a less polluting source of energy, mobilizing resources, including finance, is crucial. However, even with such support, not all of these countries will be able to move away from coal. It is therefore vital, while promoting less polluting sources of energy, to also consider investing in cleaner coal technologies. For example, high-efficiency, low-emissions technologies and carbon capture, use, and storage could help bring about significant reductions in emissions from coal-fired power generation.

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[41] A recurrent criticism is that the mechanisms put in place by these financial institutions are procyclical, which raise issues of availability and suitability.

[42] These forms of diversification require an enabling environment that fosters investment and human capital development. See, for example, MR Agosin, R Alvarez and C Bravo-Ortega, 2012, Determinants of export diversification around the world: 1962–2000, *The World Economy*, 35(3), 295–315.

[43] IEA, 2015, *World Energy Outlook 2015*.

49. In addition, faster development of renewable energy sources requires support from government policies. According to a recent OECD report,[44] government subsidies to consumption and production of fossil fuels, such as coal and oil, amount to $600 billion a year, a third of which is attributed to developed and emerging economies. In contrast, Governments spend only $112 billion per year supporting clean energy. With regard to fiscal incentives, the report indicates that about 85 percent of coal used for heating and industrial processes in OECD and emerging countries is untaxed, despite it being the most polluting of all energy sources. Similar if not bolder incentives are needed for renewables.

[44] OECD, 2015, *OECD Companion to the Inventory of Support Measures for Fossil Fuels 2015*, Paris.